

AMENDMENTS TO THE CLAIMS

The following Listing of Claims replaces all previous listings of claims in this application.

Listing of Claims:

1. (Currently amended) A catalyst for gas-phase oxidations prepared by a process comprising contacting a support with an aqueous suspension or solution comprising a transition metal oxides composition or their precursor compounds, wherein the suspension or solution contains a binder dispersion ~~consisting essentially of~~comprising a copolymer consisting essentially of an α -olefin whose α -olefin content is from 37 to 30 mol% and a vinyl-C₂-C₄-carboxylate whose ~~vinyl-vinyl-C₂-C₄-carboxylate content is at least 62 mol%, from 63 to 70 mol%.~~

2. (Currently amended) A catalyst as claimed in claim 1, wherein the ~~vinyl-vinyl-~~C₂-C₄-carboxylate copolymer is a vinyl acetate copolymer.

3. (Original) A catalyst as claimed in claim 2, wherein the vinyl acetate copolymer is an ethylene-vinyl acetate copolymer.

4. (Original) A catalyst as claimed in claim 3, wherein the ethylene-vinyl acetate copolymer comprises from 63 to 70 mol% of vinyl acetate and from 37 to 30 mol% of ethylene.

5. (Previously presented) A catalyst as claimed in claim 1, wherein the transition metal oxides composition comprises from 1 to 40% by weight of vanadium oxide, calculated as V₂O₅, and from 60 to 99% by weight of titanium dioxide, calculated as TiO₂.

6. (Previously presented) A catalyst as claimed in claim 5, wherein the transition metal oxides composition further comprises up to 1% by weight of a cesium compound,

calculated as Cs, up to 1% by weight of a phosphorus compound, calculated as P, or up to 10% by weight of antimony oxide, calculated as Sb_2O_3 .

7. (Currently amended) A process for preparing aldehydes, carboxylic acids and/or carboxylic anhydrides, comprising providing a gaseous stream comprising an aromatic hydrocarbon and a gas comprising molecular oxygen and contacting the gaseous stream with a catalyst as claimed in claim 1 at an ~~[[at]]~~ elevated temperature.

8. (Previously presented) A process as claimed in claim 7, wherein the catalyst is produced in situ from a precatalyst at an elevated temperature sufficient to decompose the copolymer.

9. (Previously presented) A process as claimed in claim 7, wherein the aromatic hydrocarbon is selected from o-xylene, naphthalene or a mixture of o-xylene and naphthalene.

10. (Currently amended) A precatalyst comprising transition metal oxides attached to a support with a binder, wherein the binder ~~consists essentially of~~ comprises a copolymer consisting essentially of an α -olefin, wherein the α -olefin content is from 37 to 30 mol%, and a vinyl- C_2 - C_4 -carboxylate, wherein the ~~vinyl-~~ vinyl- C_2 - C_4 -carboxylate content is at ~~least 62 mol% from 63 to 70 mol%.~~

11. (Previously presented) The precatalyst according to claim 10, wherein the copolymer is an ethylene-vinyl acetate copolymer comprising from 63 to 70 mol% of vinyl acetate and from 37 to 30 mol% of ethylene.

12. (Previously presented) The precatalyst according to claim 10, wherein the transition metal oxides comprises from 1 to 40% by weight of vanadium oxide, calculated as V_2O_5 , and from 60 to 99% by weight of titanium dioxide, calculated as TiO_2 .

13. (Previously presented) The precatalyst according to claim 12, wherein the transition metal oxides are disposed in at least a two zone catalyst system, wherein the upstream zone of the catalyst system contains an upstream pre-catalyst that contains less vanadium oxide relative to the amount of titanium oxide than a downstream pre-catalyst.

14. (Previously presented) The precatalyst according to claim 13, wherein the upstream pre-catalyst further comprises up to 10% by weight of antimony oxide, calculated as Sb_2O_3 , and the down stream catalyst comprises up to 1% by weight of a phosphorus compound, calculated as P.

15. (Currently amended) A binder composition in combination with transition metal oxides, the binder composition ~~consisting essentially of~~ comprising a copolymer consisting essentially of an α -olefin ~~α -olefin~~, wherein the α -olefin content is from 37 to 30 mol%, and a vinyl- C_2 - C_4 -carboxylate, wherein the ~~vinyl-vinyl- C_2 - C_4 -carboxylate content is at least 62 mol%.~~ vinyl- C_2 - C_4 -carboxylate content is at least 62 mol%.

16. (Previously presented) The binder composition according to claim 15, wherein the copolymer is an ethylene-vinyl acetate copolymer comprises from 63 to 70 mol% of vinyl acetate and from 37 to 30 mol% of ethylene.

17. (Previously presented) The binder composition according to claim 15, wherein the transition metal oxides comprises from 1 to 40% by weight of vanadium oxide, calculated as V_2O_5 , and from 60 to 99% by weight of titanium dioxide, calculated as TiO_2 .

18. (New) A catalyst as claimed in claim 5, wherein the catalyst has an H_2 consumption of less than 5.5 mol/mol of vanadium.